What is claimed is:

1. A method for improving the high and low shear rheology of a substantially grit-free and substantially fluid particulate suspension, the method comprising processing the suspension using a rotor-stator mill to produce a product.

2. The method of Claim 1 wherein the fluid particulate suspension is a substantially dispersed particulate slurry.

3. The method of Claims 1 or 2 wherein the slurry or suspension is substantially dispersed in a dispersant and water at an alkaline pH before it is milled in the rotor-stator mill.

4. The method of Claim 3 wherein the dispersant is selected from the group consisting of phosphates, polyacrylates, silicates, sulfonates and ligno-sulfates.

5. The method of Claim 3 wherein the alkaline substance is selected from the group consisting at least of soda ash, sodium hydroxide and ammonium hydroxide.

6. The method of Claim 3 wherein the suspension or slurry is substantially dispersed in sodium polyacrylate, soda ash and water.

7. The method of Claim 3 wherein the suspension or slurry is substantially dispersed at a pH of greater than 6.0, as measured by an in-process pH method.

8. The method of Claim 3 wherein the suspension or slurry is substantially dispersed at about 10-75% solids.

9. The method of Claim 3 wherein the suspension or slurry is substantially dispersed at about 55-70% solids.

10. The method of Claims 1 or 2 wherein the suspension or slurry has a maximum particle size of about 325 mesh.

11. The method of Claims 1 or 2 wherein the mill for processing the suspension or slurry is a Kady-type mill.

12. The method of Claims 1 or 2 wherein the mill for processing the suspension or slurry includes a conically shaped stator and a corresponding conically shaped rotor.

13. The method of Claims 1 or 2 wherein the mill for processing the suspension or slurry includes a stator and correspondingly shaped rotor which define a gap that is adjustable to provide optimum efficiency as the suspension or slurry is processed to produce the product.

14. The method of Claims 1 or 2 further comprising beneficiating the suspension or slurry product.

15. The method of Claim 14 further comprising re-milling the beneficiated suspension or slurry product.

16. The method of Claims 1 or 2 further comprising at least partially beneficiating the suspension or slurry prior to and/or following milling the suspension or slurry.

17. The method of Claims 1 or 2 further comprising at least partially dewatering the suspension or slurry prior to milling the suspension or slurry.

18. The method of Claim 17 further comprising beneficiating the suspension or slurry prior to dewatering the suspension or slurry.

19. The method of Claim 14 wherein beneficiating the suspension or slurry product comprises performing at least one process selected from the group consisting of fractionation, flotation, selective flocculation, magnetic separation, grinding and leaching.

20. The method of Claims 1 or 2 further comprising at least partially dewatering the suspension or slurry product to produce a filter cake and redispersing the filter cake to form a suspension or slurry.

21. The method of Claim 20 further comprising re-milling the redispersed filter cake.

22. The method of Claim 20 further comprising removing additional water from the redispersed filter cake by a process selected from the group consisting at least of evaporation and drying.

23. The method of Claim 20 wherein dewatering the suspension or slurry yields a dewatered product having up to about 75% solids.

24. The method of Claim 22 wherein the additional water is removed from the suspension or slurry by the process of evaporation.

25. The method of Claim 24 further comprising re-milling the evaporated suspension or slurry product.

26. The method of Claim 24 wherein evaporation yields a suspension or slurry product having at least about 30% solids.

27. The method of Claim 24 wherein evaporation yields a suspension or slurry product having at least about 60% solids.

28. The method of Claim 22 wherein the additional water is removed from the suspension or slurry by the process of drying.

29. The method of Claim 28 wherein drying yields a suspension or slurry product having about 85-100% solids.

30. The method of Claim 22 wherein the additional water is removed from the suspension or slurry by the process of spray drying.

31. The method of Claim 30 wherein spray drying yields a product having about 94-100% solids.

32. The method of Claims 1 or 2 wherein the particulate comprises a substantially white pigment.

33. The method of Claims 1 or 2 wherein the particulate comprises a kaolin clay.

34. The method of Claims 1 or 2 wherein the particulate comprises calcium carbonate.

35. The method of Claims 1 or 2 wherein the particulate comprises precipitated calcium carbonate.

36. The method of Claims 1 or 2 wherein the particulate comprises a synthetic silica.

37. The method of Claims 1 or 2 wherein the particulate comprises a synthetic silicate.

38. The method of Claims 1 or 2 wherein the particulate comprises an alumino-silicate.

39. The method of Claim 2 wherein the substantially grit-free and substantially dispersed particulate slurry is formed by a direct precipitation process.

40. The method of Claim 14 wherein the suspension or slurry is dewatered and redispersed.

41. The method of Claim 3 wherein the suspension is substantially dispersed at about 30-75% solids.

42. A product made by the method of Claims 1 or 2.